U.S. Department of Transportation

National Highway Traffic Safety Administration

Memorandum

Subject: **TEST REQUEST:** 2003-04 Dodge 2500/3500 Ram Trucks with Automatic Transmission

Date: JAN – 5 2005

From: Kathleen C. DeMeter, Director
Office of Defects Investigation

Reply to Attn. of:

To: Michael Monk, Director
Vehicle Research and Test Center

This memorandum requests the Vehicle Research and Test Center (VRTC) to conduct testing in support of EA04-025 as described below.

BACKGROUND:

The Office of Defects Investigation (ODI) is conducting an engineering analysis (EA04-025) of transmissions inadvertently shifting from "Park" to "Reverse" after the vehicle has been parked with the engine running. Many of these incidents have involved a vehicle unexpectedly moving under its own power after the driver has seemingly shifted it into "Park" and exited it, resulting in a collision with nearby property.

The subject vehicles are Model Year (MY) 2003 - 2004 Dodge 2500/3500 pickup trucks manufactured by the DaimlerChrysler Corporation and equipped with automatic transmissions. These vehicles are equipped with shift mechanisms mounted on the steering column and an electronic "PRNDL" (gear position indicator). Consumers have alleged that they fully engaged the shifter in the "Park" position only to experience a powered rollaway in reverse.

OBJECTIVE:

The objective of this testing is to compare the idle performance of the subject vehicles to that of peer GM and Ford ¾ ton pickup trucks as well as an earlier design (MY 2002) ¾ ton Dodge Ram pickup truck, and previously investigated Dodge vehicles that contain similar transmissions and are subject to safety recall.

TEST EQUIPMENT AND PROCEDURE:

VRTC will obtain up to 5 of the subject vehicles and three exemplar peer vehicles: MY 2003-2004 Sierra/Silverado 2500/3500, MY 2003-2004 Ford F-250/F350, and MY 2002 Dodge Ram 2500/3500. For each vehicle obtained, VRTC will:

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1. Assess the vehicle sensitivity to a "false park" condition while stationary with the engine idling:
    a. Determine the minimum transmission outer manual lever rotation from Park that allows park pawl disengagement without engaging the Reverse detent in the inner manual lever;
    b. Install a mechanical stop to ensure that the outer manual lever positioning can be done in a repeatable manner for each test run;
    c. Install a pressure transducer on rear servo service port to monitor hydraulic pressure to the rear band;
    d. Hold the transmission output shaft to 0 rpm to simulate vehicle stopped at idle; and;
    e. Determine if other forces (i.e., engine vibrations or occupant movement) can cause the transmission to engage Reverse with the shifter fully and partially resting in the Park detent position at the steering column.

2. Conduct competitive tear-downs of subject and peer vehicle shifter mechanisms to assess their false-shift sensitivity; and

3. Examine the driver/transmission shift ergonomics, comparing the subject and peer vehicles. The study should include the capture of shifter force-deflection data throughout its travel.

This study to be specifically designed by VRTC in accordance within internal safety guidelines will allow a driver to shift the test vehicle in many different conditions and situations into and out of Park. The driver will perform vehicle parking, shutdown and exit maneuvers.

This testing should be performed on test vehicles in an as-received condition.

TEST VEHICLE(S):

In coordination with ODI, the Vehicle Research Test Center shall obtain complaint vehicle(s) as required for testing.

ADDITIONAL INFORMATION:

The project engineer is Gregory Magno (phone: (202) 366-0139) who will discuss the details of the testing with your engineers. We would like to have VRTC's proposal of the procedure prior to test startup.

FINAL REPORT:

It is requested that the test work and draft report be completed as scheduling allows in coordination with ODI.